APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
JACKSON, JAKIEDA R

ART UNIT	PAPER NUMBER
2655	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/029,377	SANFILIPPO, ANTONIO
	Examiner	Art Unit	
	Jakieda R. Jackson	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .
2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-43_ is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1-43_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _19 December 2001_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a) ☐ All   b) ☐ Some * c) ☐ None of:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

DETAILED ACTION

Drawings

1.   New corrected drawings in compliance with 37 CFR 1.121(d) are required in this

application because figures 1-5, 7, 8 and 9 are handwritten and needs to be legible.

Applicant is advised to employ the services of a competent patent draftsperson outside

the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings.

The corrected drawings are required in reply to the Office action to avoid abandonment

of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   **Claims 1-7, 10-11, 13 and 15-36** are rejected under 35 U.S.C. 102(e) as being

anticipated by Dolan et al. (PGPUB 2005/0065777), hereinafter referenced as Dolan.

Regarding **claims 1 and 31**, Dolan discloses a method and system for matching

a reference document with a plurality of corpus documents, the method compromising:

deriving semantic content of the reference document according to a hierarchical

arrangement of semantic types (column 3, paragraph 0047 and column 4, paragraph

0056); and

for each corpus document,

deriving semantic content of the corpus document according to the hierarchical

arrangement of semantic types (column 2, paragraphs 0034, 0045 with column 3,

paragraph 0047 and column 4, paragraph 0056, 0061); and

producing a matching score for the corpus document by determining a

relatedness between the corpus document and the reference document from the

derived semantic content of the corpus document and the derived semantic content of

the reference document (column 4, paragraph 0059 and column 9, paragraph 0113).

Regarding **claim 2**, Dolan discloses the method and system wherein deriving

semantic content of the reference document and deriving semantic content of the

corpus document comprises:

creating tokenized elements from a text stream (column 5, paragraph 0068);

tagging each tokenized element with a grammatical category label (column 6,

paragraph 0089); and

creating a root form for each tokenized and tagged element (root; column 4,

paragraph 0063).

Regarding **claim 3**, Dolan discloses the method and system wherein deriving

semantic content of the reference document and deriving semantic content of the

corpus document further comprises assigning a semantic type within the hierarchical

arrangement of semantic types to the root form (column 8, paragraph 0111).

Regarding **claims 4, 33 and 40**, Dolan discloses the method and system wherein

producing the matching score comprises determining a distance within the hierarchical

arrangement between a semantic type that defines semantic content of the reference

document and a semantic type that defines semantic content of the corpus document

(column 4, paragraph 0061).

Regarding **claims 5, 34 and 41**, Dolan discloses the method and system wherein

determining the distance comprises accounting for a qualia relationship between types

in the hierarchical arrangement (column 4, paragraph 0061).

Regarding **claim 6**, Dolan discloses the method and system wherein the qualia

relationship comprises a direct qualia relationship (directional relationship; column

2,paragraph 0034 and column 4, paragraph 0064).

Regarding **claim 7**, Dolan discloses the method and system wherein the qualia

relationship comprises an indirect qualia relationship (column 4, paragraph 0064).

Regarding **claim 10**, Dolan discloses the method and system wherein producing

the matching score further comprises accounting for whether the semantic type that

defines semantic content of the reference document and the semantic type that defines

semantic content of the corpus document are in a subsumption relationship (adjunt

relationships; column 2, paragraph 0038).

Regarding **claims 11, 30, 35 and 42**, Dolan discloses the method and system

wherein producing the matching scored further comprises applying a filtering function to

increase importance of a smaller distance relative to a larger distance (gives

preference; column 5, paragraph 0067 and higher weights; column 7, paragraph 0094

with column 5, paragraph 0078).

Regarding **claim 13**, Dolan discloses the method and system wherein the

filtering function comprises an exponential function (log; column 9, paragraph 0128).

Regarding **claims 15 and 32**, Dolan discloses a method and system further

comprising ranking the plurality of corpus documents in accordance with the matching

score for each corpus document 9Top-ranked; column 6, paragraph 0081).

Regarding **claim 16**, Dolan discloses a method and system wherein the plurality

of corpus documents is categorized according to a categorization scheme and the

reference documents comprises an uncategorized document, the method further

comprising categorizing the uncategorized document according to the categorization

scheme with the matching score (column 6, paragraph 0089).

Regarding **claims 17, 23 and 38**, Dolan discloses the method and system

wherein the categorization scheme comprises a hierarchical categorization scheme

(column 4, paragraph 0061).

Regarding **claim 18**, Dolan discloses a method and system wherein the plurality

of corpus documents is comprised by a larger set of documents with the hierarchical

categorization scheme (column 4, paragraph 0061).

Regarding **claim 19**, Dolan discloses a method and system recited wherein the

reference document comprises a user query (a query; column 5, paragraph 0071).

Regarding **claim 21**, Dolan discloses the method and system wherein the reference document and the plurality of corpus documents are comprised by a document set, the method further comprising:

determining the matching scores for a plurality of divisions of the document set into the reference document and the corpus documents (search for matches; column 9, paragraph 0128);

combining the matching scores for each document pair comprised by the document set (combining scores; column 9, paragraph 0128); and

clustering documents within the document set by setting a threshold for the combined matching score (matching exceeds threshold; column 8, paragraph 0111 and column 9, paragraph 0129).

Regarding **claims 22 and 37**, Dolan discloses the method and system for categorizing an uncategorized document with a categorization scheme, the method comprising:

deriving semantic content of the reference document according to a hierarchical arrangement of semantic types (hierarchical structure; column 4, paragraph 0061);

performing a comparison of the semantic content of the uncategorized document with semantic content of documents previously categorized according to the categorization scheme (column 6, paragraph 0089 and columns 8-9, paragraph 0112); and

determining a category for the uncategorized document from the comparison (column 6, paragraph 0089).

Regarding **claim 24**, Dolan discloses a method and system wherein performing

the comparison comprises, for each level of the hierarchical categorization scheme:

producing a matching score for each unexcluded document categorized at such

level (score for a match; column 9, paragraph 0128); and

excluding documents at a level subordinate to such level from the matching

score (no match; column9, paragraph 0128).

Regarding **claim 25,** Dolan discloses the method and system wherein

determining a category for the uncategorized document comprises determining a

plurality of categories for the document (column 6, paragraph 0089).

Regarding **claims 26 and 39**, Dolan discloses he method and system wherein

performing a comparison comprises producing a matching score for each of the plurality

of documents previously categorized by determining a relatedness with the

uncategorized document (column 6, paragraph 0089).

Regarding **claim 27**, Dolan discloses a method and system wherein producing

the matching score comprises determining a distance within the hierarchical

arrangement between a semantic type that defines content of the uncategorized

document and a semantic type that defines semantic content of the previously

categorized document (column 4, paragraph 0061).

Regarding **claim 28**, Dolan discloses a method and system wherein determining

the distance comprises accounting for a qualia relationship between types in the

hierarchical arrangement (column 4, paragraphs 0061-0064).

Regarding **claim 29**, Dolan discloses a method and system wherein producing the matching score further comprises accounting for whether the semantic type that defines semantic content of the uncategorized document and the semantic type that defines semantic content of the previously categorized document are in a subsumption relationship (adjunct relationships; column 2, paragraph 0038).

Regarding **claims 36 and 43**, Dolan discloses a method and system wherein the engine is in communication with the internet (internet; column 3-4, paragraphs 0053-0054).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   **Claims 8-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolan in view of Pustejovsky et al. (Lexical Semantic Techniques for Corpus Analysis), hereinafter referenced as Pustejovsky.

Regarding **claim 8**, Dolan discloses the method and system for matching a reference document with a plurality of corpus documents, but does not specifically teach wherein the qualia relationship comprises a telic relationship.

Pustejovsky teaches lexical semantic techniques for corpus analysis wherein the qualia relationship comprises a telic relationship (page 333), to obtain its purpose and function.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dolan's method and system wherein the qualia relationship comprises an telic relationship, to allow one to use the same lexical entry in different contexts, where the word refers to different qualia of the noun's denotation (page 333, paragraph 2).

Regarding **claim 9**, Dolan discloses the method and system for matching a reference document with a plurality of corpus documents, but does not specifically teach a method and system wherein the qualia relationship comprises an agentive relationship.

Pustejovsky teaches lexical semantic techniques for corpus analysis wherein the qualia relationship comprises an agentive relationship (page 333), to obtain factors involved in its origin or "bringing it about."

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dolan's method and system wherein the qualia relationship comprises an agentive relationship, to allow one to use the same lexical entry in different contexts, where the word refers to different qualia of the noun's denotation (page 333, paragraph 2).

6.   **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Dolan in view of Ding (A Similarity-based Probability Model for Latent Semantic Indexing).

Regarding **claim 12**, Dolan discloses the method and system for matching a reference document with a plurality of corpus documents, but does not specifically teach a method and system wherein the filtering function comprises a Gaussian function.

Ding teaches a similarity model wherein the filtering function comprises a Gaussian function (page 60, column 2; page 61, column 1 and page 64, column 1), to clarify disambiguates related to statistical modeling.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dolan's method and system, wherein the filtering function comprises a Gaussian function, to provide a mechanism to check the significance of semantic dimensions (page 58 – page 59, column 1).

7.   **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Dolan in view of Acero (USPN 6,253,182).

Regarding **claim 14**, Dolan discloses the method and system for matching a reference document with a plurality of corpus documents, but does not specifically teach a method and system wherein the filtering function comprises a rectangular function.

Acero discloses a method Dolan discloses the method and system wherein the

filtering function comprises a rectangular function (column 11, lines 57-64 and column

17, lines 14-17), for equal weighing.

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Dolan's method and system wherein the filtering

function comprises a rectangular function, to produce a descriptor function (column 2,

lines 44-48).

8.   **Claim 20** is rejected under 35 U.S.C. 103(a) as being unpatentable over Dolan in

view of Roitblat (USPN 6,189,002).

Regarding **claim 20**, Dolan discloses the method and system for matching a

reference document with a plurality of corpus documents, but does not specifically teach

a method and system further comprising generating an output interest statement with

semantic structures derived from at least one of the reference document and the corpus

document having the highest matching score.

Roitblat teaches a process and system for retrieval of documents using context-

relevant semantic profiles wherein the plurality of corpus documents comprises a

plurality of sponsor web pages (pages retrieved from the world wide web; column 5,

lines 56-62) comprising generating an output interest statement (user's interest) with

semantic structures (semantic profiles) derived from at least one of the reference

document and the corpus document having the highest matching score (closest

weighted match; column 2, lines 28-49), to search for the documents relevant to the

context.

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Dolan's method and system wherein the plurality

of corpus documents comprises a plurality of sponsor web pages comprising generating

an output interest statement with semantic structures derived from at least one of the

reference document and the corpus document having the highest matching score, to

provide means for context-relevant document retrieval that preferentially returns items

that are relevant to the user's interest (column 2, lines 28-49).

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jakieda R. Jackson whose telephone number is

571.272.7619. The examiner can normally be reached on Monday through Friday from

7:30 a.m. to 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Hudspeth can be reached on 571.272.7843. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

JRJ
March 5, 2006

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